

Wildlife and Public Access Study

Spring/Summer 2001 Semi-Annual Report

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Summary

This is the final semi-annual report for the second year of the Wildlife and Public Access Study. This report summarizes activities undertaken from April 1, 2001 through October 31, 2001. The second year of field observations ended on September 30, 2001. We conducted observations at the three paired trail and control sites. Observations went very smoothly, with no significant problems in the field. In addition, we held the spring and summer quarterly all-hands meetings, held meetings with the site supervisors and assisted Bay Trail staff in answering inquiries about the study and the preliminary findings from the first year. During the fall of 2001, we reviewed and prepared the second year data for preliminary analysis. A summary of the second year preliminary findings is attached.

Study Background

The Wildlife and Public Access Study was initiated in 1996 by the San Francisco Bay Trail Project to scientifically study the potential effects of public use of trails on shorebirds adjacent to the San Francisco Bay Trail. Jana Sokale and Lynne Trulio, the principal investigators, designed a study based on the questions most important to the stakeholders concerned about trail impacts. The specific objectives of the study are to assess the potential impacts of trail use on shorebird and waterfowl diversity, abundance and behavior.

To address these objectives, the study was designed to collect data at three paired trail and non-trail (control) sites around the San Francisco Bay. The sites are located at Bothin Marsh in Mill Valley (Marin County), Redwood Shores (San Mateo County), and Shoreline at Mountain View (Santa Clara County). Before observations began for the second year, the control sites were moved to new locations to increase statistical robustness. The trail sites remained as they were in the first year of the study.

Data were collected at the paired trail and control sites four times a month, on two weekend days and two weekdays. Two years of data have been collected. Observations occur at fixed, 100-foot by 100-foot study quadrants. The study required 21 observers directed by three site supervisors (one supervisor per site). The study design required data collection at the paired trail and control sites for 4-hour periods on the same day during the same part of the tidal cycle. A full discussion of the study design, site selection and data collection protocols was provided in three reports to the San Francisco Bay Trail Project, which are available upon request (Proposed Research Plan, 1996, Site Selection Report, 1998 and Research Protocols, 1999).

Monthly Activities for the 2nd Year

Data collection for this period began on April 1, and during the final two quarters of the study, field observers spent 24 days collecting data at each of the paired sites. A total of 144 data sets were collected during this time period. Data were collected equally on weekday and weekend days. The specific tasks accomplished during this period are listed below.

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April 2001

- All data sets (2 weekdays and 2 weekend days) were collected for the month at each site.
- At Bothin, the observation on Friday, April 20 was shortened by 1 hour, due to rain. The last hour of data was normalized. Total bird abundance was normalized by adding up all the numbers of birds during the last 12 snapshots from the other 11 days of the quarter, and then dividing by 11. The average number was added to the date's total number of birds observed. This procedure was done for both the trail and control quad. Trail user activity was normalized for the last hour of observations by adding up the trail-users for the last 12 snapshots of the other 11 complete observation dates of the quarter. These totals were added up (113) and divided by 11 (10.27 rounded down) and then added to the total number of trail users for the day. Therefore, 10 trail users were added to the final number of trail users at the trail site only.
- Bothin had a large number of Short-billed Dowitchers moving through the area on April 20 and 21.
- At Redwood Shores, the observation on Friday, April 6 was shortened by 1 hour, due to heavy rain. The last hour of data was normalized.
- On Saturday, April 7 Redwood Shores experienced heavy winds, approximately 25 mph, throughout the entire observation period.
- On Friday, April 27 Redwood Shores observers recorded a banded sandpiper (RY/YS).
- Shoreline data were collected on all scheduled dates at both control and trail sites. No rain dates occurred during the third quarter.
- On April 2, observations began 45 minutes later at the Shoreline control site than at the trail site due to a time error.
- As a result of unfavorable weather conditions on April 6 and 7, only three hours of data were collected at the Shoreline control site. The data were normalized for both dates. Total Bird Abundance was normalized by taking the other 10 observations during the third quarter (April/May/June) and averaging the number of birds observed during the missing snapshots on Data Form 1: Wildlife Data.

May 2001

- All data sets (2 weekdays and 2 weekend days) were collected for the month at each site.
- All four observations were performed as scheduled without event at Bothin.
- Sean Casto began as the interim supervisor of Redwood Shores on May 11th. Ingrid Harrald temporarily left as supervisor to complete fieldwork in Alaska on May 19th.
- All observations were completed as scheduled with no rain delays or cancellations at Redwood Shores.
- On Saturday, May 5 Redwood Shores observers noticed that construction had begun near the control site just outside of the preserve entry gate. Bulldozers and trucks drove past the control site flushing all birds. An observation deck was built just outside the preserve entry gate. Construction took approximately 6 weeks to complete.
- On Saturday, May 5 Redwood Shores staff observed a black-crowned night heron feeding on baby ducklings in the pond behind the control site.
- On Friday, May 18 the young man who built the bench in front of the Redwood Shores trail site introduced himself to the observers. He uses the bench for fishing, primarily for sharks and striped bass. It even has rod holders in front of the bench, though he was never seen fishing.

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- Shoreline data were collected on all scheduled dates at both control and trail sites. No rain dates occurred during the third quarter.
- During May and June, seasonal tidal fluctuations resulted in low high-tide levels in the marsh at the Shoreline trail site. Some C2 and C3 tide levels at high tide were recorded on the data sheets.

June 2001

- All data sets (2 weekdays and 2 weekend days) were collected for the month at each site.
- All four observations were performed as scheduled without event at Bothin.
- All observations were completed as scheduled at Redwood Shores.
- Snowy and Great Egrets are nesting colonially in the eucalyptus trees behind the Redwood Shores control site adjacent to the water treatment plant ponds. Mallards, Northern Shovelers and Canada Geese are also breeding in the pond behind the control site. Black-crowned night herons seem to be just roosting at the Redwood Shores control site.
- Trail users seem to be increasing at the Redwood Shores control site.
- Adrienne Morrison resigned as an observer from Redwood Shores and Chris Brown switched from a regular observer to pinch hitter status.
- Shoreline data were collected on all scheduled dates at both control and trail sites. No rain dates occurred during the third quarter.
- During May and June, seasonal tidal fluctuations resulted in low high-tide levels in the marsh at the Shoreline trail site. On June 15 and 16, the high tides were exceptionally low, where the water never breached the channels in the marsh. Four hours of data were recorded with exposed mudflats at C7 tide level.
- The all hands quarterly meeting was held on June 9. This meeting included a sea kayak tour and interpretive walk at Elkhorn Slough.

July 2001

- Supervisors ran their sites without major weather difficulties. Observers collected data on all required days at each site.
- All four observations were performed as scheduled without event at Bothin.
- On Saturday, July 21, Bothin control quad observers collected data for both the current control quad and the control quad used one year ago simultaneously.
- The July 9 Redwood Shores observations were cut 20 minutes short at the trail site and 45 minutes short at the control site due to lack of light.
- The July 9 and July 13 observations were completed with 3 observers at Redwood Shores due to short notice cancellations.
- *Spartina foliosa* is growing noticeably thicker in the Redwood Shores trail site.
- Data were collected four times each month on all scheduled dates at both the Shoreline control and trail sites. No rain dates were scheduled during the fourth quarter.
- During this quarter, seasonal tidal fluctuations resulted in low high-tide levels in the marsh at the Shoreline trail site. Data documents most high tides at C2, C3, and C4 tide levels. On July 15 and July 16, the high tides were exceptionally low, where the water never breached the channels in the marsh. On these dates, four hours of data were recorded with exposed mudflats at C7 tide levels.

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August 2001

- All data sets (2 weekdays and 2 weekend days) were collected for the month at each site. Weather was mild to warm with no need to reschedule observations.
- On Friday August 31, distance measurements were taken with an electronic distance meter from the Bothin control quad observation point to various points in the study area as a matter of interest.
- On Saturday, August 18 two observers were absent at Redwood Shores. One person attended each site with no missed snapshots.
- On Friday, August 17 a harbor seal was spotted just outside the Redwood Shores trail site.
- Once again, a noticeable number of joggers and walkers were using the trail at the Redwood Shores control site.
- Data were collected four times each month on all scheduled dates at both the Shoreline control and trail sites. No rain dates were scheduled during the fourth quarter.
- During this quarter, seasonal tidal fluctuations resulted in low high-tide levels in the marsh at the Shoreline trail site. Data documents most high tides at C2, C3, and C4 tide levels. On August 26 and August 27, the high tides were exceptionally low, where the water never breached the channels in the marsh. On these dates, four hours of data were recorded with exposed mudflats at C7 tide levels.

September 2001

- All data sets (2 weekdays and 2 weekend days) were collected for the month at each site. Weather was mild to warm with no need to reschedule observations.
- On Friday, September 14, Bothin control quad observers collected data for both current control quad and the control quad used one year ago.
- On Sunday, September 16, trail users flew a large, colorful kite over Bothin Marsh; all birds in quad and surrounding area vacated the region.
- On Monday September 17, a red-necked phalarope was observed in the trail quad during snapshots. This was a new snapshot species, seen on the last day of two years of data collection.
- On Friday, September 21, one observer was absent from the Redwood Shores trail site.
- Data were collected four times each month on all scheduled dates at both the Shoreline control and trail sites. No rain dates were scheduled during the fourth quarter.
- During this quarter, seasonal tidal fluctuations resulted in low high-tide levels in the marsh at the Shoreline trail site. Data documents most high tides at C2, C3, and C4 tide levels.
- On September 30, 2001 the fourth quarter and second year of the study ended.

October 2001

- All hands celebrated the completion of two years of field observations on October 25. A decorative cake complete with a clapper rail and great blue heron in a marsh scene was specially prepared by Hazel's daughter, Nancy Peters of Peter's Bakery in San Jose. Bay Conservation and Development staff and Bay Trail Boardmember Joe LaClair and Bay Trail staff Ceil Scandone announced that grant funding had been secured through the National Oceanic & Atmospheric Administration (NOAA) for a third year of research. Analysis of the first two years of data will provide direction for a new research project.

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Conclusion

This concludes the second year of research for the Wildlife and Public Access Study. The field portion of this study ran exceptionally well due to the dedication and good humor of our talented site leaders and motivated site observers. Data were collected as required by the study design and there were no significant field problems. The observers continued to demonstrate that they are dedicated, competent, and truly engaged in the study. They collected high quality data. All the site leaders, Lisa Hug, Ingrid Harrauld and Debra Chromczak, continued from the first year. Sean Casto served as interim site supervisor at Redwood Shores from mid-May through September. The study was fortunate to retain these excellent leaders and keen managers of their sites and their observers. The administrative help of Ceil Scandone, Bay Trail Project staff, continues to be invaluable in making this project run smoothly.

The study now enters an intensive data input and analysis phase. All data will be entered into a database and will be analyzed for large-scale effects and more subtle findings. This thorough analysis will not be complete until Spring/Summer 2003. Interim findings will be reported as available to the Bay Trail staff. After the analysis is completed, the findings will be presented at scientific meetings and public forums, and the results will be submitted for publication. These analyses and findings will be used to help design a third year of study to answer other important questions concerning the interaction of trails and wildlife in the San Francisco Bay Area.

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